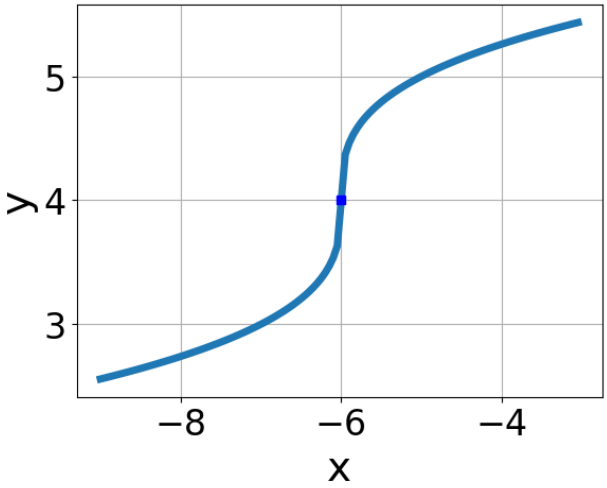
1. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x+6} + 4$

B. $f(x) = \sqrt[3]{x-6} + 4$

C. $f(x) = -\sqrt[3]{x-6} + 4$

D. $f(x) = -\sqrt[3]{x+6} + 4$

E. None of the above

---

2. What is the domain of the function below?

$$f(x) = \sqrt[4]{-7x-8}$$

A. $(-\infty, \infty)$

B. $[a, \infty)$, where $a \in [-1.2, -1.07]$

C. $(-\infty, a]$, where $a \in [-1.1, -0.39]$

D. $(-\infty, a]$, where $a \in [-1.24, -1.06]$

E. $[a, \infty)$, where $a \in [-0.89, -0.69]$

---

3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-7x-6} - \sqrt{-4x+6} = 0$$

A. $x_1 \in [-1.95, -0.73]$ and $x_2 \in [1.2, 1.6]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [-4.73, -3.97]$

D. $x_1 \in [-4.73, -3.97]$ and $x_2 \in [-3.2, 0.8]$

E. $x \in [-0.65, 0.93]$

---

4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-2x+6} - \sqrt{-3x-7} = 0$$

A. $x \in [-16, -8]$

B. All solutions lead to invalid or complex values in the equation.

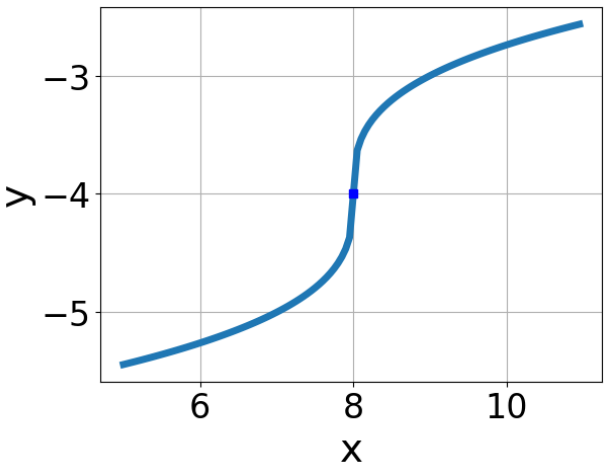
C. $x_1 \in [-5.33, -1.33]$ and $x_2 \in [1, 5]$

D. $x_1 \in [-16, -8]$ and $x_2 \in [1, 5]$

E. $x \in [0, 4]$

---

5. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-8} - 4$

B. $f(x) = -\sqrt[3]{x-8} - 4$

C. $f(x) = -\sqrt[3]{x+8} - 4$

D. $f(x) = \sqrt[3]{x+8} - 4$

E. None of the above

---

6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{12x^2 - 32} - \sqrt{8x} = 0$$

A. $x_1 \in [-1.73, -0.76]$ and $x_2 \in [0, 6]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [0.82, 1.39]$ and $x_2 \in [0, 6]$

D. $x \in [-1.73, -0.76]$

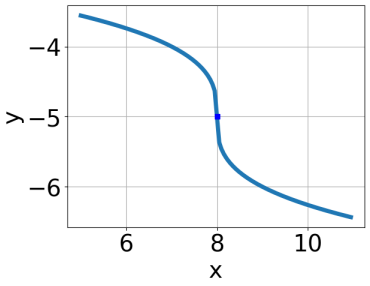
E. $x \in [1.89, 2.04]$

---

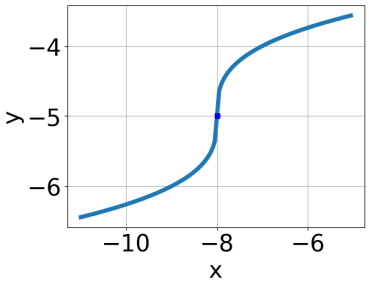
7. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x-8} - 5$$

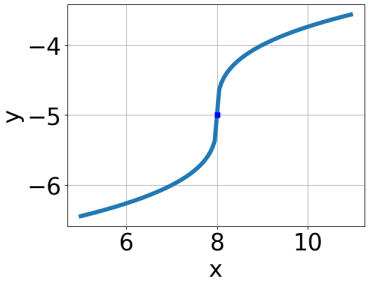
A.



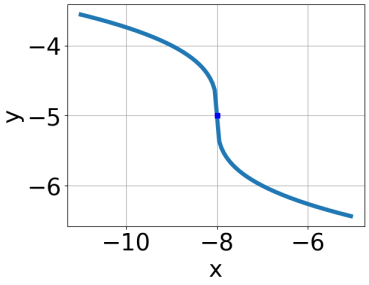
C.



B.



D.



E. None of the above.

8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-27x^2+35}-\sqrt{-24x}=0$$

A. $x \in [1.6, 2.1]$

B. $x_1 \in [-3.5, 0.1]$ and $x_2 \in [0.67, 4.67]$

C. All solutions lead to invalid or complex values in the equation.

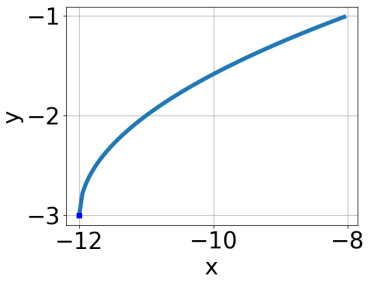
D. $x_1 \in [0.7, 1.4]$ and $x_2 \in [0.67, 4.67]$

E. $x \in [-3.5, 0.1]$

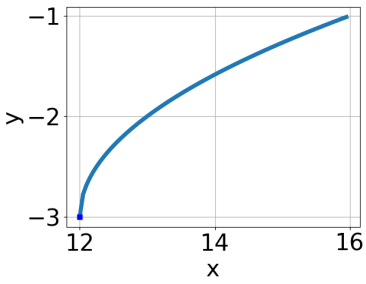
9. Choose the graph of the equation below.

$$f(x)=\sqrt{x-12}-3$$

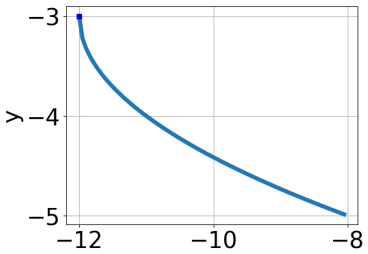
A.



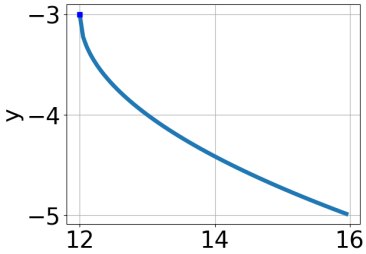
C.



B.



D.



E. None of the above.

10. What is the domain of the function below?

$$f(x)=\sqrt[3]{8x+9}$$

A. The domain is $(-\infty, a]$, where $a \in [-1.45, -1]$

B. The domain is $(-\infty, a]$, where $a \in [-0.96, -0.54]$

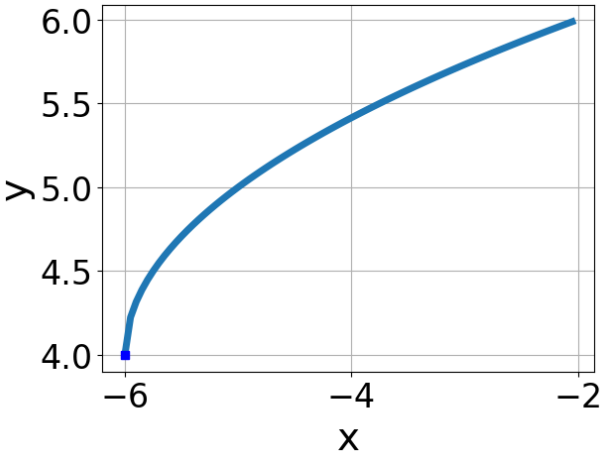
C. $(-\infty, \infty)$

D. The domain is $[a, \infty)$, where $a \in [-0.92, -0.86]$

E. The domain is $[a, \infty)$, where $a \in [-1.64, -1.01]$

---

11. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x+6} + 4$

B. $f(x) = -\sqrt{x-6} + 4$

C. $f(x) = -\sqrt{x+6} + 4$

D. $f(x) = \sqrt{x-6} + 4$

E. None of the above

---

12. What is the domain of the function below?

$$f(x) = \sqrt[7]{-4x+9}$$

A. The domain is $(-\infty, a]$, where $a \in [1.3, 3.6]$

B. The domain is $(-\infty, a]$, where $a \in [0, 1.7]$

C. The domain is $[a, \infty)$, where $a \in [-0.6, 1.3]$

D. The domain is $[a, \infty)$, where $a \in [2.2, 2.4]$

E. $(-\infty, \infty)$

---

13. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-3x+9} - \sqrt{4x-7} = 0$$

A. $x_1 \in [1.78, 3.14]$ and $x_2 \in [0, 10]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [-0.11, 0.57]$

D. $x \in [1.78, 3.14]$

E. $x_1 \in [0.34, 2.25]$ and $x_2 \in [0, 10]$

---

14. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-5x+9} - \sqrt{5x-9} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [1, 4]$

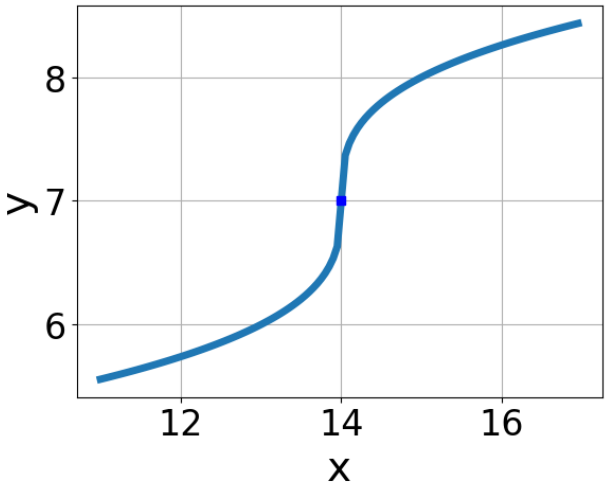
C. $x \in [-0.9, 1.1]$

D. $x_1 \in [1, 4]$ and $x_2 \in [-2.2, 4.8]$

E. $x_1 \in [1, 4]$ and $x_2 \in [-2.2, 4.8]$

---

15. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x-14}+7$

B. $f(x) = \sqrt{x-14}+7$

C. $f(x) = -\sqrt{x+14}+7$

D. $f(x) = \sqrt{x+14}+7$

E. None of the above

---

16. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{45x^2+42} - \sqrt{-89x} = 0$$

A. $x \in [-0.91, -0.66]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [-1.81, -0.85]$ and $x_2 \in [-0.78, 0.22]$

D. $x_1 \in [-0.13, 2.15]$ and $x_2 \in [0.2, 4.2]$

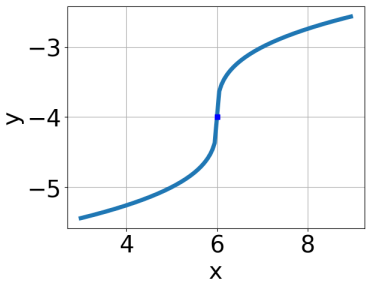
E. $x \in [-1.81, -0.85]$

---

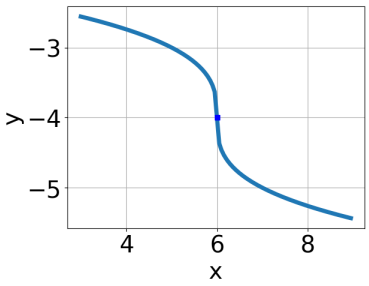
17. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x-6} - 4$$

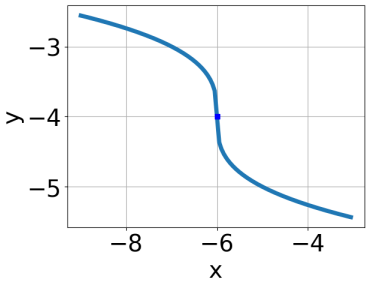
A.



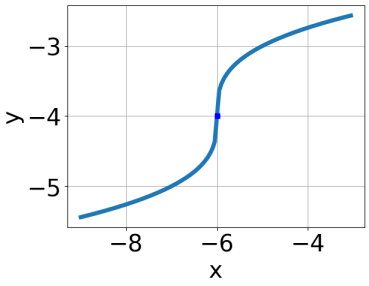
C.



B.



D.



E. None of the above.

---

18. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-36x^2 - 56} - \sqrt{-95x} = 0$$

A. $x_1 \in [0.79, 1.17]$ and $x_2 \in [1.75, 2.75]$

B. $x_1 \in [-1.03, -0.47]$ and $x_2 \in [-4.75, 0.25]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [1.45, 2.74]$

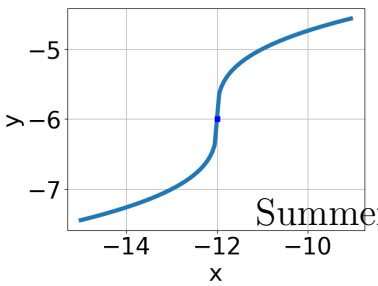
E. $x \in [0.79, 1.17]$

---

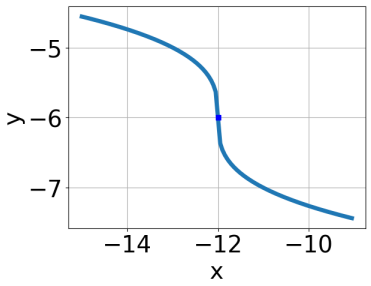
19. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x + 12} - 6$$

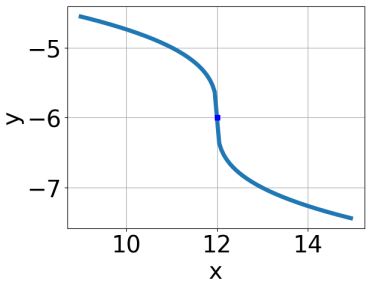
A.



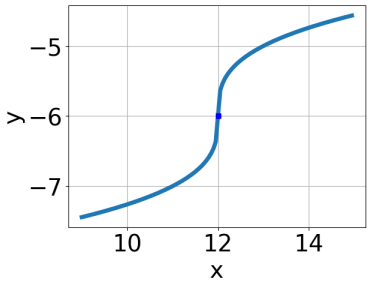
B.



D.



C.



E. None of the above.

---

20. What is the domain of the function below?

$$f(x) = \sqrt[4]{8x - 3}$$

A. $(-\infty, a]$, where $a \in [1.67, 6.67]$

B. $[a, \infty)$, where $a \in [-2.62, 2.38]$

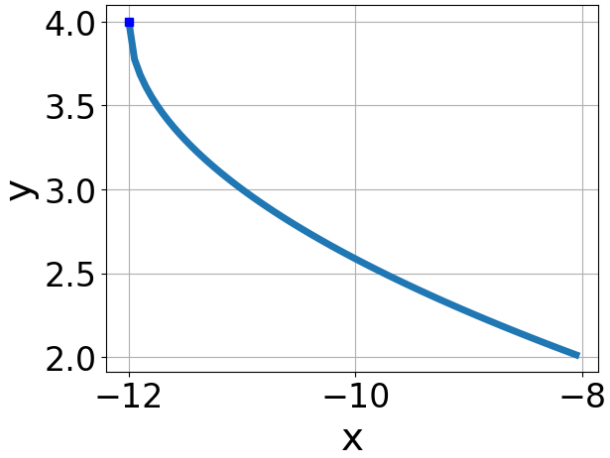
C. $[a, \infty)$, where $a \in [1.67, 4.67]$

D. $(-\infty, \infty)$

E. $(-\infty, a]$, where $a \in [-0.62, 2.38]$

---

21. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x-12}+4$

B. $f(x) = \sqrt[3]{x-12}+4$

C. $f(x) = \sqrt[3]{x+12}+4$

D. $f(x) = -\sqrt[3]{x+12}+4$

E. None of the above

---

22. What is the domain of the function below?

$$f(x) = \sqrt[8]{7x+5}$$

A. $(-\infty, \infty)$

B. $[a, \infty)$, where $a \in [-1.88, -1.02]$

C. $[a, \infty)$, where $a \in [-0.82, -0.36]$

D. $(-\infty, a]$, where $a \in [-2.1, -0.83]$

E. $(-\infty, a]$, where $a \in [-0.95, 0.49]$

---

23. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x-7} - \sqrt{2x-5} = 0$$

A. $x \in [-0.19, 0.29]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [1.42, 1.95]$

D. $x_1 \in [0.42, 1.49]$ and $x_2 \in [2.01, 2.77]$

E. $x_1 \in [-0.19, 0.29]$ and $x_2 \in [0.03, 0.82]$

---

24. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{4x+6} - \sqrt{6x+8} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x_1 \in [-2.85, -1.21]$ and $x_2 \in [-1.2, -0.66]$

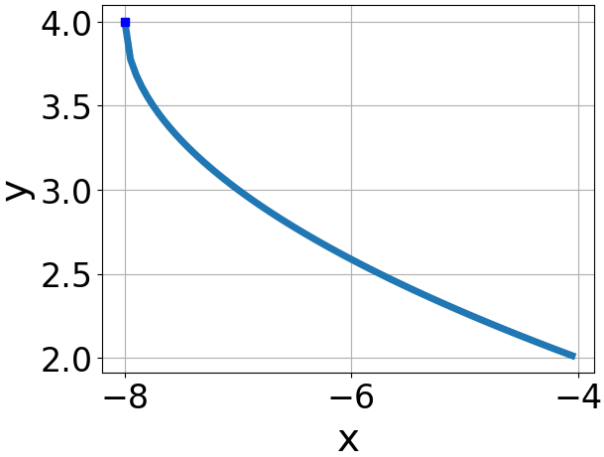
C. $x \in [6.06, 7.44]$

D. $x_1 \in [-2.85, -1.21]$ and $x_2 \in [-1.75, -1.28]$

E. $x \in [-1.13, -0.94]$

---

25. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x+8} + 4$

B. $f(x) = -\sqrt{x+8} + 4$

C. $f(x) = \sqrt{x-8} + 4$

D. $f(x) = -\sqrt{x-8}+4$

E. None of the above

---

26. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{8x^2-56}-\sqrt{18x}=0$$

A. $x \in [-3, -1.6]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [0.8, 2.8]$ and $x_2 \in [2, 9]$

D. $x_1 \in [-3, -1.6]$ and $x_2 \in [2, 9]$

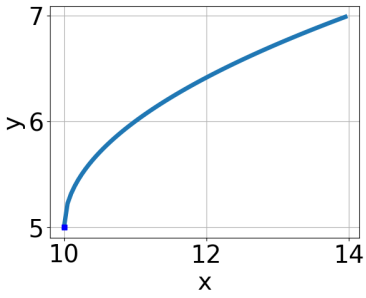
E. $x \in [2.6, 4.7]$

---

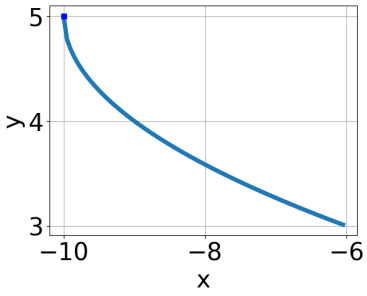
27. Choose the graph of the equation below.

$$f(x) = -\sqrt{x-10}+5$$

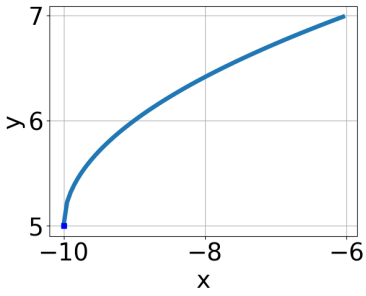
A.



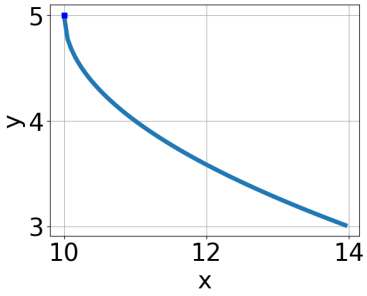
C.



B.



D.



E. None of the above.

28. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-56x^2 - 35} - \sqrt{91x} = 0$$

A. $x \in [-1.03, -0.83]$

B. $x_1 \in [-1.03, -0.83]$ and $x_2 \in [-1.25, 0.13]$

C. All solutions lead to invalid or complex values in the equation.

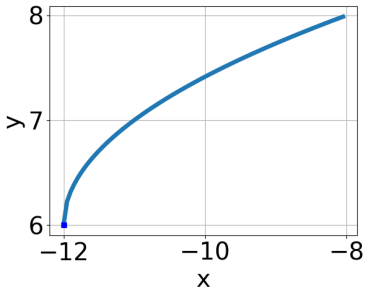
D. $x \in [-0.66, -0.32]$

E. $x_1 \in [0.94, 1.32]$ and $x_2 \in [0.06, 1.18]$

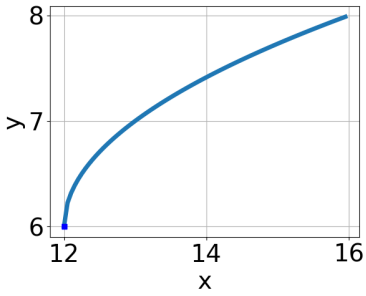
29. Choose the graph of the equation below.

$$f(x) = \sqrt{x + 12} + 6$$

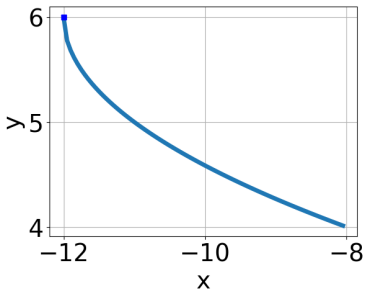
A.



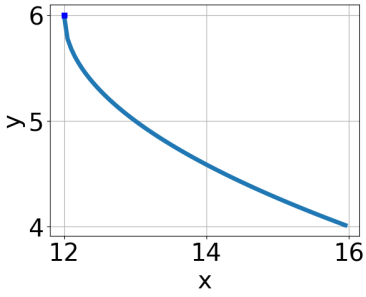
C.



B.



D.



E. None of the above.

30. What is the domain of the function below?

$$f(x) = \sqrt[8]{-8x + 7}$$

A. $(-\infty, a]$, where $a \in [0.68, 1.07]$

B. $[a, \infty)$, where $a \in [0.92, 1.43]$

C. $[a, \infty)$, where $a \in [0.73, 0.91]$

D. $(-\infty, a]$, where $a \in [0.99, 1.58]$

E. $(-\infty, \infty)$
